US

## Safety Data Sheet acc. to OSHA HCS

Printing date 07/01/2024

Reviewed on 07/01/2024

# **1** Identification · Product identifier • Trade name: Mercuric Chloride 100 GPL in Methanol · Article number: 1366A · Details of the supplier of the safety data sheet · Manufacturer/Supplier: Aqua Solutions, Inc. 6913 Highway 225 DEER PARK, TX 77536 USA800-256-2586 · Information department: Technical Coordinator Sherman Nelson shermann@aquasolutions.org · Emergency telephone number: Chemtrec: 800-424-9300 Canutec: 613-996-6666 **2** Hazard(s) identification · Classification of the substance or mixture GHS02 Flame Flammable Liquids 2 H225 Highly flammable liquid and vapor. GHS06 Skull and crossbones Acute Toxicity - Oral 2 H300 Fatal if swallowed. Acute Toxicity - Dermal 3 H311 Toxic in contact with skin. Acute Toxicity - Inhalation 3 H331 Toxic if inhaled. GHS08 Health hazard Germ Cell Mutagenicity 2 H341 Suspected of causing genetic defects. Toxic to Reproduction 2 H361 Suspected of damaging fertility or the unborn child. Specific Target Organ Toxicity - Single Exposure 1 H370 Causes damage to the central nervous system and the visual organs. Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to organs through prolonged or repeated exposure. GHS05 Corrosion H314 Causes severe skin burns and eye damage. Skin Corrosion 1B Eye Damage 1 H318 Causes serious eye damage. (Contd. on page 2)

• GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

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· Label elements

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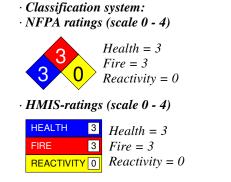
(Contd. of page 1)

· Hazard pie			ussifica ana iaberea accor	ang to me Globally Harmon	uzeu System (0115).
			$\mathbf{>}$		
GHS02	GHS05 GH	SO6 GHS	08		
· Signal wor	<b>rd</b> Danger				
	etermining com	ponents of	labeling:		
Methanol	~				
Mercuric (					
· Hazard sta		1			
	mmable liquid d	ind vapor.			
Fatal if sw					
	ontact with skin				
	vere skin burns		iage.		
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				ing. Rinse skin with water/sh	ower.
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<i>Continue</i> r		Catmadia	a duis a lattention		
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			vater spray to extinguish.	11 C 1 C USE.	
			container tightly closed.		
	well-ventilated				
Store in a Store locke		ριατε. κεεμ			
		iner in acc.	rdance with local/regiona	l/national/international regul	lations
Dispose 0j	coments/contu	mer muel	raunce with tocall regiona		(Contd. on page 3)

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#### · Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· vPvB: Not applicable.

### 3 Composition/information on ingredients

· Chemical characterization: Mixtures

• Description: Mixture of the substances listed below with nonhazardous additions.

### · Dangerous components:

Dungerous components			
CAS: 67-56-1	Methanol	88.597%	
CAS: 7487-94-7	Mercuric Chloride	11.403%	
	·		

### 4 First-aid measures

· Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### • After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.

- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:
- Do not induce vomiting; immediately call for medical help.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

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### **5** *Fire-fighting measures*

- · Extinguishing media
- $\cdot$  Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

#### 6 Accidental release measures

- *Personal precautions, protective equipment and emergency procedures Mount respiratory protective device. Wear protective equipment. Keep unprotected persons away.*
- · Environmental precautions:
- Do not allow product to reach sewage system or any water course.
- Inform respective authorities in case of seepage into water course or sewage system.
- Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to section 13.
- Ensure adequate ventilation.
- Reference to other sections
- See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

### · Protective Action Criteria for Chemicals

· PAC-1:		
CAS: 67-56-1	Methanol	530 ppm
CAS: 7487-94-7	Mercuric Chloride	0.1 mg/m <sup>3</sup>
· PAC-2:		
CAS: 67-56-1	Methanol	2,100 ppm
CAS: 7487-94-7	Mercuric Chloride	0.14 mg/m <sup>3</sup>
· PAC-3:		
CAS: 67-56-1	Methanol	7200* ppm
CAS: 7487-94-7	Mercuric Chloride	38 mg/m <sup>3</sup>

## 7 Handling and storage

· Handling:

- · Precautions for safe handling
- Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.
- Prevent formation of aerosols.

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· Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities

· Storage:

- Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- *Specific end use(s) No further relevant information available.*

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

•	<b>Control</b>	parameters
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	ponents with limit values that require monitoring at the workplace: c 67-56-1 Methanol	
PEL	Long-term value: 260 mg/m <sup>3</sup> , 200 ppm	
	Short-term value: 325 mg/m <sup>3</sup> , 250 ppm Long-term value: 260 mg/m <sup>3</sup> , 200 ppm Skin	
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEIc	
CAS:	7487-94-7 Mercuric Chloride	
PEL	Long-term value: 0.1 mg/m <sup>3</sup> as Hg; see OSHA standard interpretation memo	
REL	Long-term value: 0.05* mg/m <sup>3</sup> Ceiling limit value: 0.1 mg/m <sup>3</sup> as Hg; *Vapor; Skin	
TLV	Long-term value: 0.025 mg/m³ as Hg; A4; Skin; BEI	
· Ingre	edients with biological limit values:	
CAS:	: 67-56-1 Methanol	
	15 mg/L LD50 Intraperitoneal: urine Time: end of shift LD50: Methanol (background, nonspecific)	
CAS.	: 7487-94-7 Mercuric Chloride	
	20μg/g creatinine LD50 Intraperitoneal: urine Time: prior to shift LD50: Mercury	
• Addi	tional information: The lists that were valid during the creation were used as basis.	(Contd. on page 6

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Exposure controls
Personal protective equipment:
General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes. Avoid contact with the eyes and skin.
Breathing equipment: In case of brief exposure or low pollution use respiratory filter device. In case

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air. • Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



\*

Tightly sealed goggles

· Body protection: Protective work clothing

Information on basic physical and chemical properties General Information		
Appearance:		
Form:	Liquid	
Color:	Clear	
Odor:	Methanol	
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	64 °C (147.2 °F)	

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Flash point:	11 °C (51.8 °F)
Flammability (solid, gaseous):	Highly flammable.
Auto igniting:	455 °C (851 °F)
Decomposition temperature:	Not determined.
Ignition temperature:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapo mixtures are possible.
Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
Density at 20 °C (68 °F):	0.87695 g/cm <sup>3</sup> (7.31815 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wate	e <b>r):</b> Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	88.6 %
VOC content:	88.60 %
	776.9 g/l / 6.48 lb/gal
Solids content:	11.4 %
Other information	No further relevant information available.

# 10 Stability and reactivity

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

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11 Toxicolo	gical inj	formation
• Informatio • Acute toxic		cological effects
· LD/LC50 1	values tha	t are relevant for classification:
ATE (Acut	te Toxicity	y Estimate)
Oral	LD50	31.6 mg/kg
Dermal	LD50	339 mg/kg
Inhalative	LC50/4h	
<ul> <li>on the eye: Strong cau         Strong irri,         Sensitizatio         Additional         The product         Toxic         Corrosive         Irritant         Very toxic</li> </ul>	1: Caustic stic effect: tant with 1 on: No set toxicolog ct shows th g will lead	effect on skin and mucous membranes.
· Carcinoge	nic catego	pries
· IARC (Inte	ernationa	Agency for Research on Cancer)
CAS: 7487	'-94-7 Me	prcuric Chloride 3
· NTP (Nati	onal Toxi	cology Program)
None of the	e ingredie	nts is listed.
· OSHA-Ca	(Occupat	ional Safety & Health Administration)
None of the	e ingredie	nts is listed.

# **12 Ecological information**

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· Other adverse effects No further relevant information available.

### **13 Disposal considerations**

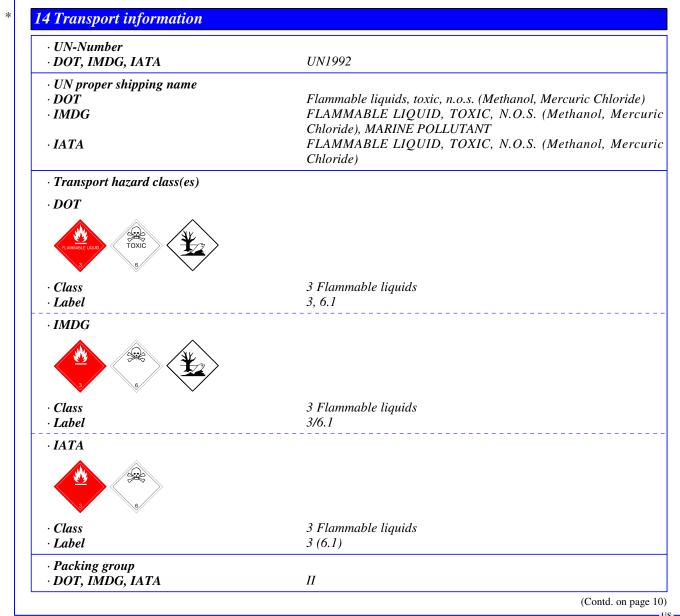
· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.



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Environmental hazards:	Product contains environmentally hazardous substances Mercuric Chloride
• Marine pollutant:	Yes (DOT)
	Symbol (fish and tree)
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.
• Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DQT	
• Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
Remarks:	Special marking with the symbol (fish and tree).
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities ( $\widetilde{E}Q$ )	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOI MERCURIC CHLORIDE), 3 (6.1), II

# **15 Regulatory information**

 Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
 Sara

· Section 355 (extremely hazardous substances): CAS: 7487-94-7 Mercuric Chloride · Section 313 (Specific toxic chemical listings): All ingredients are listed. · TSCA (Toxic Substances Control Act): Methanol ACTIVE Mercuric Chloride ACTIVE · Hazardous Air Pollutants All ingredients are listed. · Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. (Contd. on page 11) US

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• Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

All ingredients are listed.

## · Carcinogenic categories

· EPA (Environmental Protection Agency)

CAS: 7487-94-7 Mercuric Chloride

## · TLV (Threshold Limit Value)

CAS: 7487-94-7 Mercuric Chloride

# ·NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

• *GHS label elements* The product is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms* 



· Signal word Danger

· Hazard-determining components of labeling: Methanol Mercuric Chloride · Hazard statements Highly flammable liquid and vapor. Fatal if swallowed. Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to the central nervous system and the visual organs. Causes damage to organs through prolonged or repeated exposure. · Precautionary statements Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dusts or mists. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Immediately call a poison center/doctor. Specific treatment (see on this label). If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Get medical advice/attention if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use CO2, powder or water spray to extinguish. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

• Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

#### **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department. · Contact: Date of Preparation / Last Revision: · Date of preparation / last revision Revision 1.2 07/01/2024: Reviewed SDS for accuracy. MH/STN Revision 0.0, 05-29-2024: Creation date for SDS. STN 07/01/2024 / 1.1 · Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit Flammable Liquids 2: Flammable liquids – Category 2 Acute Toxicity - Oral 2: Acute toxicity - Category 2 Acute Toxicity - Dermal 3: Acute toxicity - Category 3 Skin Corrosion 1B: Skin corrosion/irritation - Category 1B Eye Damage 1: Serious eye damage/eye irritation - Category 1 Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2 Toxic to Reproduction 2: Reproductive toxicity - Category 2 Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) - Category 1 Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) - Category 1 • \* Data compared to the previous version altered.